

## ABSTRACT

## Bi-modular adaptive CDMA receiver

The invention concerns a method of receiving a signal transmitted by a transmitter ( $k$ ) and arriving at an array of antennae (300) after having propagated along a plurality of paths ( $i$ ), comprising a filtering stage (310<sub>k</sub>) decomposing each antenna signal into separate signals ( $x_{\ell,i,k}$ ) issuing from the different paths, a channel formation step (320<sub>k</sub>) forming path signals ( $y_{i,k}$ ) from the said separate signals by means of a first set of complex coefficients ( $b_{\ell,i,k}$ ), a combination step (340<sub>k</sub>) linearly combining the said path signals by means of a second set of complex coefficients ( $c_{i,k}$ ) in order to supply a combined signal ( $z_k$ ), the method being characterised in that a plurality of first error signals ( $\varepsilon'_{i,k}$ ) are formed (331<sub>k</sub>) between a reference value ( $q_k$ ) of the signal transmitted and the said path signals ( $y_{i,k}$ ) and in that a second error signal ( $\varepsilon''_k$ ) is formed (351<sub>k</sub>) between the said reference value and the said combined signal ( $z_k$ ), the first and second sets of complex coefficients being adapted (330<sub>k</sub>, 350<sub>k</sub>) so as to respectively minimise the root mean square values of the first signals and of the second error signal.

Fig. 3